

**\*82601\***

Page 1

**\*N900040100\***

```
Setup Start *NS1*
Stop *NS2*
```

\*10\*

**Cust Item ID:**  
**Customer:**

**Reference:**

Approvals: Process Plan: MLJ Date: 12/04/03 Tooling: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N) \_\_\_\_\_

Run	Start	*NR1*
	Stop	*NR2*

[illegible]

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 82601

April-03-12 11:28:11 AM

**\*82601\***

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Item ID: D2872-043 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Nut Plate Assembly  
 Start Date: 03/04/2012 Start Qty: 10.00 **\*10\*** Cust Item ID:  
 Required Date: 17/04/2012 Req'd Qty: 10.00 **\*10\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 <b>*130*</b> QC Quality Control	QC8- Inspect parts - second check  Memo	0.00  0.00		26 12 - 4 - 9		10	4		
140 <b>*140*</b> Small Fab Small Fab	Small Fab  Memo 1-Deburr 2- C'sink as per Dwg D2872	0.00  0.00				10X			3/2/04/10
150 <b>*150*</b> QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00  0.00		Size 10		(10)			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 82601**

April-03-12 11:28:11 AM

**\*82601\***

Page 3

Item ID: D2872-043

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Item Name: Nut Plate Assembly

Stop **\*NS2\***

Start Date: 03/04/2012 Start Qty: 10.00

**\*10\***

Cust Item ID:

Required Date: 17/04/2012 Req'd Qty: 10.00

**\*10\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Chemical Conversion Coat per QSI005 4.1	0.00							
<b>*160*</b>									
HandFinish	Memo	0.00				10	0		BL 12-4-10.
Hand Finishing									
170	QC3- Inspect Part Finish	0.00							
<b>*170*</b>									
QC	Memo	0.00				10	0		Jul 12/04/10
Quality Control									
180		0.00							
<b>*180*</b>									
Small Fab	Small Fab	0.00							
Small Fab	Memo	0.00							
Small Fab	1-Assemble as per Dwg D2872 2-Identify as D2872-043					10x	0		ES 12/04/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 82601

April-03-12 11:28:11 AM

**\*82601\***

Page 4

Item ID: D2872-043

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Item Name: Nut Plate Assembly

Stop **\*NS2\***

Start Date: 03/04/2012 Start Qty: 10.00

**\*10\***

Cust Item ID:

Required Date: 17/04/2012 Req'd Qty: 10.00

**\*10\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC5- Inspect part completeness to step on W/O	0.00							
<b>*190*</b>									
QC	Memo	0.00							
Quality Control									
200	Identify as per dwg & Stock Location: <u>LG</u>	0.00							
<b>*200*</b>									
Packaging	Memo	0.00							
Packaging									
210	QC21- Final Inspection - Work Order Release	0.00							
<b>*210*</b>									
QC	Memo	0.00							
Quality Control									

(16)

12/04/11 JB

12/4/12 JG

12-04-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

April-03-12 11:28:14 AM

Page 1

Work Order ID: 82601

\*82601\*

Parent Item: D2872-043

\*D2872-043\*

Parent Item Name: Nut Plate Assembly

Start Date: 03/04/2012

Required Date: 17/04/2012

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP A05.09.13New issueKJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MS21086L5 *MS21086L 5* Nut Plate		Purchased	No			100	Each	84.0000	3	30			
**													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST303		84							
				102380		34							
				102728		50							
M6061T6B0.375X00.75 0 *M6061T6B0 375X00 750* 6061T6 BAR .375 x .750		Purchased	No			180	f	28.1500	0.3125	3,289.474			
**													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				MAT001		28.15							
				113719		8.15							
				117653		20							
MS20426AD4-5 *MS20426AD4-5* Rivet		Purchased	No			180	Each	5,022.000	6	60			
**													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST317		5022							
				6874		5022							

30  
30  
30

3,289.474

3.3  
0.33  
60  
60

ml 12/04/06  
PD 12/04/07

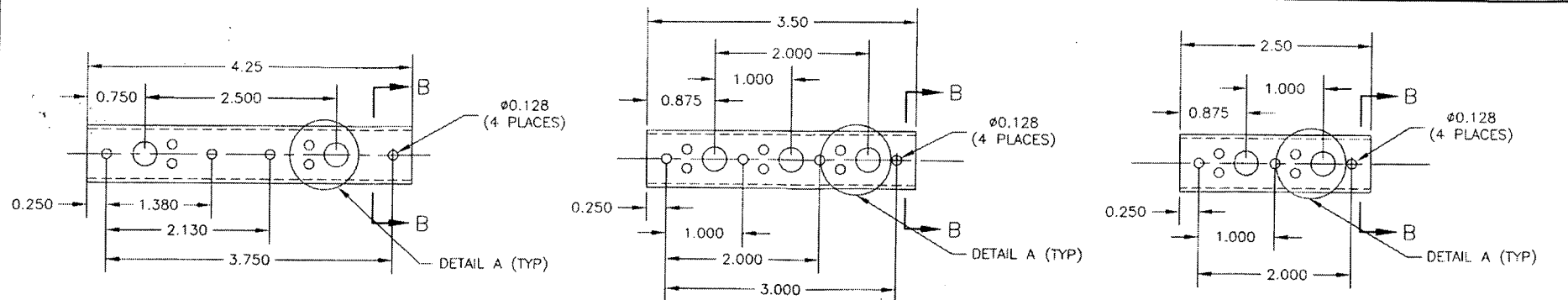
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**D2872-1**

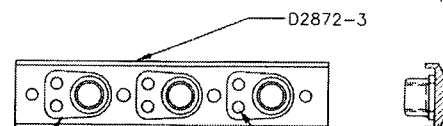
MS21086L5 NUT PLATE  
(TYP 2 PLACES)



**D2872-041**

MS20426AD4-5  
RIVET (TYP 4 PLACES)

**D2872-3**



**D2872-043**

MS20426AD4-5  
RIVET (TYP 6 PLACES)

**D2872-5**

MS21086L5 NUT PLATE  
(TYP 2 PLACES)



**D2872-045**

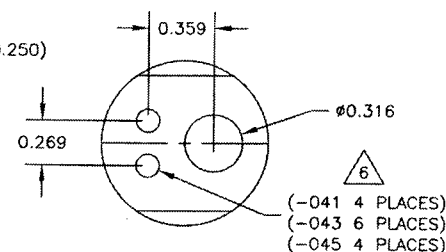
MS20426AD4-5  
RIVET (TYP 4 PLACES)

**D2872-1/-3/-5 RADIUS BLOCK**

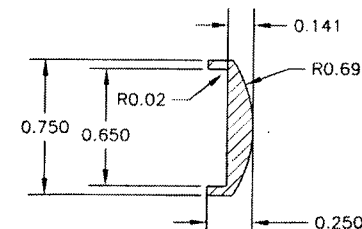
- 1) MATERIAL: 5052-H32/H34 BAR (QQ-A-225/7) (REF. DART SPEC M5052H32B0.750X00.250) OR 6061-T6 BAR (QQ-A-225/8 OR QQ-A-200/8) (REF. DART SPEC M6061T6B0.750X00.250)
- 2) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE INCHES
- 5) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 6)  $\phi 0.128$  PILOT + C'BORE CURVED SIDE  $\phi 0.230 \times 0.050$  DEEP + C'SINK CURVED SIDE  $\phi 0.225 \times 100^\circ$

**D2872-041/-043/-045 NUT PLATE ASSEMBLY**

- 1) INSTALL MS21086L5 NUT PLATE IN ORIENTATION SHOWN USING MS20426AD4-5 RIVETS



DETAIL A (SCALE 2:5)



SECTION B-B (SCALE 2:5)

**D2872-041/-043/-045 NUT PLATE ASSEMBLY PARTS LIST**

-041	-043	-045	PART NUMBER	DESCRIPTION
X			D2872-041	NUT PLATE ASSEMBLY
	X		D2872-043	NUT PLATE ASSEMBLY
		X	D2872-045	NUT PLATE ASSEMBLY
1			D2872-1	RADIUS BLOCK
	1		D2872-3	RADIUS BLOCK
		1	D2872-5	RADIUS BLOCK
4	6	4	MS20426AD4-5	RIVET
2	3	2	MS21086L5	NUT PLATE

RELEASED  
05.07.26

A	05.07.26	NEW ISSUE
DESIGN PH	DRAWN BY PH	<b>DART</b> DART AEROSPACE LTD HAMPSHIRE, ONTARIO, CANADA
CHECKED DS	APPROVED DS	DRAWING NO. D2872
DATE 05.07.26		TITLE RADIUS BLOCK
		REV. A SHEET 1 OF 1 SCALE 4:5

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SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 82601 MLJ

12/04/03

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 86 82601
<b>Description:</b> NUT PLATE		<b>Part Number:</b> D2B72-3
<b>Inspection Dwg:</b> 02872	<b>Rev:</b> A	<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
3.50	$\pm 0.030$	3.501	✓		VERN	PHD-01
2.000	$\pm 0.010$	2.000	✓		"	"
1.000	$\pm 0.010$	1.000	✓		"	"
0.875	$\pm 0.010$	0.874	✓		"	"
0.250	$\pm 0.010$	0.251	✓		"	"
1.000	$\pm 0.010$	1.000	✓		"	"
2.000	$\pm 0.010$	2.001	✓		"	"
3.000	$\pm 0.010$	3.001	✓		"	"
Ø 0.128	+0.005 - 0.001	0.130	✓		"	"
0.359	$\pm 0.010$	0.358	✓		"	"
0.269	$\pm 0.010$	0.270	✓		"	"
Ø 0.316	+0.005 - 0.001	0.316	✓		"	"
Ø 0.230 x 0.050	+0.005 -0.001 x $\pm 0.010$	0.230 x 0.053	✓		"	"
0.141	$\pm 0.010$	0.141	✓		"	"
0.750	$\pm 0.010$	0.753	✓		"	"
0.650	$\pm 0.010$	0.642	✓		"	"
0.250	$\pm 0.010$	0.251	✓		"	"

<b>Measured by:</b> PD / B.D	<b>Audited by:</b> [Signature]	<b>Preliminary Approval:</b>
<b>Date:</b> 12/04/07	<b>Date:</b> 12.4.9	<b>Date:</b>

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15